



10 TUESDAY

## Visit With the Exhibitors

North & South Ballrooms, Purdue Memorial Union

- Coffee With the Exhibitors, 7:00–8:50 AM
- Exhibitor Luncheon, 11:00 AM–1:50 PM

## Opening Session

Loeb Theater, Stewart Center

9:00–10:50 AM

## Student Poster Session

Purdue Memorial Union

11:00 AM–1:50 PM

# Technical Sessions Schedule 2020

	Bridges	Connected/Autonomous Transportation		Design/Construction		Finance/Administration	Local Agency		Maintenance & Operations		Multimodal Transportation	Pavements		Project Management/Planning		Public Relations/Communications	Traffic Operations
	STEW 206	STEW 279	STEW 306	Loeb Theater	STEW 302	STEW 311	STEW 218AB	STEW 278	STEW 214CD	STEW 218CD	See locations below	PMU 250	STEW 214AB	Fowler Hall	PMU 240	STEW 202	STEW 310
11:00–11:50 AM					16. ADA Data Collection and Transition Plan Implementation	21. How to Prevent Loss of Federal Funds	26. Analysis of Recreational and Last-Mile E-Scooter Utilization	31. Relinquishment and Reconstruction of SR 44—Franklin, Indiana			44. Indiana Aviation Growth and Opportunities STEW 306	49. Application of Geosynthetic Paving Fabric Interlayer on I-65	54. Asphalt Specifications for Local Paving Projects		63. Electronic Records Management System (ERMS) Best Practices		
1:00–1:50 PM	1. UAS-Based Inspection of Bridges	5. Analytical Techniques to Use Historical Connected Vehicle Data to Assess Platooning Potential on Interstate Corridors	9. Physiological Monitoring During Autonomous Driving	12. Intelligent Road Design and Construction Using 3D Models	17. How Postwar Historic Districts Can Impact Your Project	22. INDOT eInvoice Application for Consultant Contracts	27. Aging Urban Corridors: Big Challenges, Big Rewards	32. Federal Funding for Locals: Monitoring and Audits	36. Geosynthetic Interlayers: Improvements for Recyclability, Millability, and Performance of Millings	40. New INDOT/DNR Maintenance MOU	45. KIPDA Regional Freight Mobility Study and Design Guide STEW 204	50. The Concrete Process	55. Update on Partial Depth Patching Techniques for Concrete Pavement	59. Evaluating the Cost of NEPA on INDOT Projects	64. Water Resource Permitting and Mitigation Is Changing!	68. Roundabout Public Outreach	72. 2019 Developments in Emergency Vehicle Traffic Signal Preemption
2:00–2:50 PM	2. GPR and IR in Bridge Program Maintenance and Management	6. Road Condition Detection and Classification From Existing CCTV Feed	10. Autonomous Delivery Robots: Technology, Opportunities, and Lessons Learned	13. Specifications and Special Provisions: Let's Get It Write	18. 22nd Street Reconstruction, Elwood, Indiana	23. Past, Present, and Future of Priced Managed Lanes	28. Asset Management for Local Elected Officials	33. Rating Unpaved Roads Using the Inventory-Based Rating System	37. Alternate Methods for Preserving Asphalt Pavements	41. Using Mobile LiDAR to Make Engineering Decisions	46. Conexus Freight and Logistics Council STEW 204	51. Measuring In Situ Permeability of Aggregate Drainage Layers	56. Rehabilitation of Low-Volume Roads Using FDR	60. What Utilities Wish We Knew, Part 2	65. Transforming Vehicular Corridors Into Inviting Spaces	69. Giving Voice to Silent Stakeholders	73. Design, Specifications, and Operations of Intersection Conflict Warning Systems
3:00–3:50 PM	3. Load Rating of Bridges Without Plans	7. Truck Platooning: Considerations for Multistate Corridor Deployment	11. Moving Object Detection and Tracking With Doppler LiDAR	14. 2D Hydraulic Modeling for Streambank Stabilization in the White River	19. Diverging Diamond Interchanges: Best Practices and Lessons Learned	24. Capital and Financial Planning and Alternative Revenue Sources	29. MVH/LRS Funding for Elected Officials	34. Public Construction and Procurement	38. Innovation: Field-Driven Ideas for Improvement	42. Mobile LiDAR for Ditch Mapping and Work Zones	47. Keeping 'em Rolling . . . From Strollers to Scooters to Semis STEW 204	52. Exploring Pavement Options on I-69: Added Travel Lanes	57. Preventative Maintenance: Seal Coating Toolbox	61. Six Pillars of Utility Engineering	66. How to Hit a Moving Target: US 50 Intersection Improvement	70. Public Involvement Procedures: Enhancing Public Engagement Through Techniques and Best Practices	74. Recent Developments in Signing at INDOT
4:00–4:50 PM	4. BIM for Bridges and Structures Pooled Fund Initiative	8. Autonomous Vehicles: Public Policy Issues		15. Pitfalls of Interchange Designs: Observations Relating to IDM Chapter 48	20. Roundabouts and Dogbones: Interchange Planning and Design Challenges	25. Advancing Asset Management at INDOT: Expanding Its Assets in GIS	30. Utility Regulation: 5G Small Cells		39. Tree Risk Management Planning: Know, Plan, Budget, Implement	43. Administer and Manage Construction Projects With Ease	48. On-Demand Campus Transit Pilot at Purdue University STEW 204	53. E-Ticketing Implementation Update	58. Improved Concrete Pavement Performance via Optimizing Aggregate Gradations	62. Planning and Environmental Linkage (PEL)	67. Using Federal-Aid Funding in Quick Growing Communities	71. IndyGo: Engaging With the Public During BRT Planning and Design	75. Increasing Pedestrian Safety Through the Use of Automated Performance Measures

108A. Indiana Statutes and Rules for Professional Engineering Licensure

Loeb Theater, Stewart Center  
8:00–8:50 AM

109A. Professionalism and Ethics in the Practice of Engineering

Loeb Theater, Stewart Center  
9:00–9:50 AM

	Aviation	Bridges	Connected/ Autonomous Transportation	Design/Construction		Human Capital/ Leadership	Local Agency		Maintenance & Operations	Multimodal Transportation	Pavements		Project Management/ Planning	Safety	Traffic Operations	Unmanned Aerial Systems (UAS)	Winter Weather Operations	
	STEW 202	STEW 206	STEW 279	See locations below	STEW 306	STEW 214AB	STEW 218AB	STEW 278	STEW 214CD	STEW 204	PMU 250	STEW 214AB	Fowler Hall	STEW 218CD	STEW 310	STEW 311	PMU 240	
8:00–8:50 AM		81. Local Agency Bridge Preservation	88. Electric Vehicle Charging: Research and Initiatives	95. Red Line BRT STEW 302	102. Project Controls: Practices for Success		113. Community Crossings Grant Fund Application Training	118. Keeping Trailers Connected to the Truck	121. Building a Successful Crack Sealing Program: Tips From the Pros	128. The Future of Active Transportation in Indiana	134. Identifying and Correcting Hydroplane Risk: Three Case Studies	141. Jointed Precast Concrete Pavement: Design, Specification, and Installation	144. Marion County Summer 2019 Work Zone Coordination and Closing the Interstate	149. LiDAR-Based School Bus Passing Detection System	155. Using IHSDM-HSM Predictive Method Software to Model Passing Lanes	161. Wheel-Based LiDAR for Mapping Airport Runway Infrastructure	166. The Best Use of Underbody Scrapers and Side-Mounted Wings	
9:00–9:50 AM	76. Sustainable Taxiway Rehabilitation and Remote Runway Reconstruction Logistics	82. Integrating New Technologies in Bridge Construction		96. Strategies and How-Tos on Interstate Closures for MOT STEW 302	103. Unique Utility Coordination				119. Leading Your Team for High Performance: Define the Right Outcomes!	122. How Do I Maintain That Drainage Ditch?	129. Building Transportation Systems to Connect and Renew North St. Louis	135. Pavement Recycling and Community Crossings: Agency Success Stories	142. Image-Based Road Macrotecture Determination	145. Being a Good Teaming Partner	150. How Are They Doing? J-Turns in the Wild	156. Integrating Pedestrians and Bicycles at Signalized Intersections	162. UAS for Checking the Alignment of Precision Approach Path Indicators	167. Smart Vehicle With Automated Precision Brine Application
10:00–10:50 AM	77. Airside Applications for AGVTs and Aircraft Fleet Mix at Non-Towered Airports	83. Restoration and Reconstruction of Historic Bridges	90. Improving Dilemma Zone Safety Through the Use of GLOSA and Connected Vehicle Data	97. Lessons Learned Using OpenRoads in Complex Roadway Design STEW 302	104. DNR Permitting From a Consultant's Perspective			114. Certified Lane Mileage and Updating Your Road Inventory	120. Changes to the CDL Application Process and What This Means for Public Works	123. Drainage Basics on County Roads	130. Monon Boulevard: A Linear Park That Integrates Vehicles With Pedestrians	136. INDOT Core Analysis for Pavement Preservation Sealer Treatments	143. More Durable Concrete Solutions	146. Early Implementation of the Giant Leaps Master Plan	151. Aries System Overhaul and the Use of Crash Location Data to Improve Traffic Safety	157. Roadway Design and Driver Behavior	163. Unmanned Aerial Systems Modeling in a GIS	168. Extracting Stuck Equipment Safely
1:00–1:50 PM	78. Aviation Planning: The FAA Perspective	84. Designing With a Strut-and-Tie Method Computer Program	91. Planning Today for CAVs Tomorrow: Planning-Level Capacity Adjustments	98. North Split Project Update Loeb Theater	105. I-69 Section 6: Construction Challenges and Opportunities	110. Empowering Emerging and Experienced Professionals in the Workplace	115. Improving Public Works Construction Inspection Skills		124. INDOT Maintenance: Next Level	131. Fundamentals of Freight Data	137. Concrete Overlays: Effective Solutions for Local Agencies		147. I-69 ORX: A Bistate Megaproject = Project Management2	152. Road Safety Studies on Curves in Indiana	158. Low- Cost Bottleneck Improvements and NPMRDS Practical Uses	164. FAA Airmen Database Spatial Patterns	169. The Science and Use of Winter Chemicals	
2:00–2:50 PM	79. Infrastructure and Resiliency Planning for Airports	85. Waterproofing Membrane for Concrete Boxes and Culverts	92. INDOT Updates: Disruptive Transportation Technologies	99. MOT Considerations for Preservation Projects Loeb Theater		111. Nurturing Diversity in the Workplace	116. Cybersecurity Essentials for Local Government		125. Concrete Overlay Deck Epoxy Injection	132. Comparing Speed Distribution of Micro-Mobility Modes	138. Concrete 101: The Fundamentals of Ready-Mix Concrete			153. Highway Safety 2020—Catch the Vision: Saving Lives	159. How We Ended Up This Way: Some History	165. Detection of Conflicts Between ADS-B-Equipped Aircraft and UAS	170. Salt Spreader Calibration	
3:00–3:50 PM	80. Pavement Deicing and Reducing Wildlife Hazards at Airports	86. Railroad Bridges Up to Date	93. Moving From Research to Practical Application in a Connected and Autonomous World	100. Geotechnical Slide Correction With Drilled Shafts Loeb Theater	106. All Things Plant Growth Layer		117. Why I Need a Local Road Safety Financial Plan for Local Officials		126. Temporary Traffic Control for Local Roads: Planning and Design	133. Agricultural Logistics: Managing Variable Capacities	139. What is Superpave 5 for Asphalt Pavements?		148. University Parkway: Managing a Complex Corridor Planning Process	154. Improving Pedestrian Safety with New Technology	160. How to Use Google Travel Time Data Tool		171. How Not to Fail at Winter Operations	
4:00–4:50 PM		87. Visualizing Risk in Geotechnical Site Characterization	94. Case Studies of Statewide CV/AV and Technology Planning	101. Roundabout Design: VISSIM Use and Design Tradeoffs Loeb Theater	107. Design and Construction of Drilled Shafts for Landslides		127. Temporary Traffic Control for Local Roads: Managing the Jobsite		140. Asphalt Specification and Project Updates									